

results of BLAST



BLASTP 2.2.6 [Apr-09-2003]

Reference:

Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schäffer, Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997), "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", Nucleic Acids Res. 25:3389-3402.

RID: 1054225001-026414-17909

Query=

(23 letters)

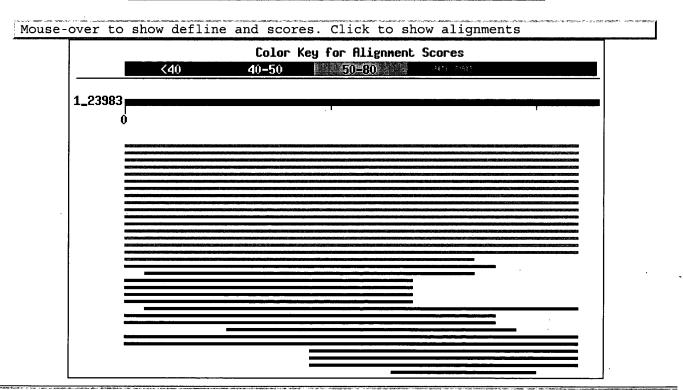
Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF

1,438,044 sequences; 462,300,935 total letters

If you have any problems or questions with the results of this search please refer to the BLAST FAQs

Taxonomy reports

Distribution of 475 Blast Hits on the Query Sequence



Related Structures

Sequences producing significant alignments:

Score (bits) Value

gi 28883520 gb AAO49724.1 neuregulin 1 isoform 4 [Homo sap gi 284149 pir A43273 heregulin precursor, splice form alph	80	5e-15 5e-15	
gi 7513201 pir 138405 neu differentiation factor - human (80	5e-15	L
gi 7669526 ref NP 039258.1 neuregulin 1 isoform HRG-alpha; gi 7513200 pir 138403 neu differentiation factor - human (80	5e-15 5e-15	L
gi 7669520 ref NP 039254.1 neuregulin 1 isoform ndf43; her	80	5e-15	L
gi 22004079 tpg DAA00048.1 TPA: neuregulin 1 isoform HRG-a	80	5e-15	
gi 1633217 pdb 1HAF Heregulin-Alpha Epidermal Growth Fact	80	5e-15	
gi 640060 pdb 1HRE Heregulin-Alpha (Epidermal Growth Fact	80	5e-15	
gi 22004076 tpg DAA00045.1 TPA: neuregulin 1 isoform ndf43	80	5e-15	
gi 408399 gb AAA19949.1 neu differentiation factor	75	9e-14	
gi 408383 gb AAA19941.1 new differentiation factor >gi 408	75	9e-14	
gi 7514023 pir I61719 neu differentiation factor - rat >gi	75	9e-14	
gi 11066040 gb AAG28428.1 AF194439 1 SMDF neuregulin alpha	75	9e-14	
gi 11066042 gb AAG28429.1 AF194440 1 SMDF neuregulin alpha	75		L
gi 2459765 gb AAB71812.1 neuregulin [Mesocricetus auratus]	75	9e-14	
gi 2135345 pir S62676 heregulin isoform alpha 2 - human (f gi 9297012 sp 093383 NRG1 XENLA Pro-neuregulin-1 precursor	57	2e-08	
	43	3e-04	L
	33		L
	33		L
gi 12738842 ref NP 073725.1 polydomain protein; D430029009	33	· · · · · ·	L
gi 85085 pir A24420 notch protein - fruit fly (Drosophila	32		
gi 24639454 ref NP 476859.2 Notch CG3936-PA [Drosophila me	32		L
gi 157988 gb AAB59220.1 Notch growth factor [Drosophila me	32		L
gi 18875406 ref NP 573502.1 crumbs homolog 1 [Mus musculus	32		
gi 4467343 emb CAB37610.1 EG:140G11.1 [Drosophila melanoga	32		L
gi 18175295 gb AAL10682.1 CRB1 isoform II precursor [Homo	32	*****	L
gi 6912322 ref NP 036208.1 crumbs homolog 1 [Homo sapiens] gi 13898380 gb AAK48712.1 AF307972 1 E-selectin [Equus caba	$\frac{32}{31}$	0.91 L 2.2	L
gi 7459690 pir T09059 notch4 - mouse >gi 2564947 gb AAB820	31	2.2	
gi 6754874 ref NP 035059.1 Notch gene homolog 4; Notch gen	_31	2.2	L.
gi 18252658 gb AAL66380.1 AF461685 1 Jedi-736 protein [Mus	31	2.2	L
gi 27503754 gb AAH42490.1 3110045G13Rik protein [Mus muscu	31	2.2	
gi 22779881 ref NP 082736.1 Jedi [Mus musculus] >gi 170172	_31	2.2	L
gi 17386053 gb AAL38571.1 AF444274 1 Jedi protein [Mus musc	_31	2.2	L
gi 1401160 gb AAC52630.1 Notch4	31	2.2	L
gi 28498994 ref XP 192820.2 similar to Notch gene homolog	_30	4.0	L
gi 6679096 ref NP 032742.1 Notch gene homolog 3; Notch gen	30	4.0	L
gi 27712336 ref XP 222675.1 similar to crumbs homolog 1 [M gi 7670249 dbj BAA95001.1 secretory protein containing EGF	29 29	5.3 5.3	
<u>gi 18858545 ref NP 571019.1 </u> deltaC [Danio rerio] >gi 67395	_29	5.3	
gi 12231943 gb AAG49316.1 AF315554 1 notch-like transmembra	29	7.1	
gi 12231945 gb AAG49317.1 AF315555 1 notch-like transmembra gi 24041035 ref NP_077719.2 notch 2 preproprotein [Homo sa	29	7.1	L
	_ <u>29</u>		L
	29		L
	<u>29</u>		
gi 11527997 gb AAG37073.1 AF315356 1 NOTCH2 protein [Homo s gi 17136484 ref NP 476729.1 slit CG8355-PB [Drosophila mel	29		
gi 17136484 ref NP 476729.1 slit CG8355-PB [Drosophila mel gi 103392 pir B36665 slit protein 2 precursor - fruit fly	<u>29</u> 29	9.6 9.6	-
gi 6755785 ref NP 035717.1 tyrosine kinase receptor 1; D43	29	-	

gi 28278680 gb AAH44262.1 Similar to delta-like 1 (Drosoph gi 21294624 gb EAA06769.1 ENSANGP00000020724 [Anopheles ga	<u>29</u> 29	9.6 9.6	
gi 134526 sp P24014 SLIT_DROME Slit protein precursor >gi 1	_29	9.6	
gi 6678660 ref NP 032510.1 laminin, beta 3; nicein, 125kD;	_29	9.6	L
gi 107565 pir S24066 protein-tyrosine kinase (EC 2.7.1.112 gi 1695891 gb AAB37131.1 Notch ligand X-Delta-2 [Xenopus 1	<u>29</u> 29	9.6 9.6	_
gi 26342428 dbj BAC34876.1 unnamed protein product [Mus mu	_29	9.6	
gi 4885631 ref NP 005415.1 tyrosine kinase with immunoglob	_29	9.6	
gi 20138948 sp Q04721 NTC2 HUMAN Neurogenic locus notch hom	29	9.6	
gi 28204833 gb AAH46452.1 tyrosine kinase receptor 1 [Mus	_29	9.6	
gi 27806793 ref NP_776390.1 tyrosine kinase with immunoglo	29	9.6	
gi 477532 pir A49175 Motch B protein - mouse (fragment) >g	29	9.6	L
gi 17230242 ref NP 486790.1 hypothetical protein [Nostoc s	29	9.6	L
gi 4590406 gb AAD26567.1 AF126540_1 slit protein [Drosophil	29	9.6	
gi 28574998 ref NP_612113.2 CG12086-PA [Drosophila melanog	_29	9.6	
gi 20835723 ref XP 123612.1 laminin, beta 3 [Mus musculus]	<u>29</u> 29	9.6 9.6	-
gi 227465 prf 1704200A slit gene gi 2143489 pir 156985 kalinin B1 - mouse	29	9.6	
gi 260308 gb AAB24262.1 tie receptor tyrosine kinase [mice	29	9.6	
gi 13242247 ref NP_077334.1 notch gene homolog 2,; notch g	29	9.6	
gi 514357 gb AAA72722.1 [Drosophila melanogaster slit locu	29	9.6	
gi 17136482 ref NP 476728.1 slit CG8355-PA [Drosophila mel	_29	9.6	
gi 9965313 gb AAG10039.1 E-selectin [Canis familiaris]	<u>28</u> 28	13 13	
gi 462500 sp P33730 LEM2 CANFA E-selectin precursor (Endoth	28	13	L
gi 17542742 ref NP_500460.1 EGF-like protein [Caenorhabdit gi 4321121 gb AAB17010.2 Notch-3 homolog [Carassius auratus]	28	13	
gi 28574699 ref NP 787974.1 CG33196-PB [Drosophila melanog	_28	13	L
gi 2569970 emb CAA71379.1 Notch receptor protein [Danio re gi 21758935 dbj BAC05419.1 unnamed protein product [Homo s	28 28	13 13	
gi 29568116 gb AA041836.1 secreted protein SST3 [Mus muscu	28	17	Ц
gi 27686355 ref XP_237415.1 similar to FLJ00133 protein [H	_28	17	Ц
gi 3065951 gb AAC14346.1 Notch3 [Homo sapiens]	_28	17	
gi 4557799 ref NP 000426.1 Notch homolog 3 [Homo sapiens]	28	17	L
gi 29501760 ref NP 817104.1 AC2 protein [Okra yellow vein	28	17	
gi 2506805 sp P24043 LMA2 HUMAN Laminin alpha-2 chain precu	_28	17	
gi 9966775 ref NP_064472.2 Notch 3 [Rattus norvegicus] >gi	_28	17	
gi 3108187 gb AAC15789.1 Notch 3 [Homo sapiens]	28	17	
gi 9845218 ref NP 062870.1 AC2 protein [Cotton leaf curl G	<u>28</u> 28	17 17	
gi 11907550 dbj BAB19674.1 notch-1 [Gallus gallus] gi 21295976 gb EAA08121.1 ENSANGP00000010271 [Anopheles ga	28	17	
	28	17	
gi 1661108 gb AAB18388.1 laminin alpha 2 chain [Homo sapiens] gi 453952 emb CAA80259.1 precursor of oocyst wall protein	28	17	
gi 28268556 emb CAD62694.1 C2 protein [Hollyhock leaf crum	28	17	
gi 28559088 ref NP 000417.2 laminin alpha 2 subunit precur	_28	17	
gi 1841543 gb AAC63097.1 AAC63097 notch4 [Homo sapiens]	<u>27</u> .	23	
gi 25029126 ref NP 739180.1 conserved hypothetical protein	$\frac{27}{27}$	23 - 23	
gi 30178572 gb EAA04964.2 ENSANGP0000005397 [Anopheles ga		23	
gi 1754627 dbj BAA13116.1 NOTCH4 [Homo sapiens] gi 30175502 gb EAA12624.2 ENSANGP00000018452 [Anopheles ga	$\frac{27}{27}$	23 23	
gi 18859115 ref NP 571516.1 notch homolog la; neurogenic l	27	23	

Alignments

```
Select all
                                        Deselect all
     Get selected sequences
j >gi | 28883520 | gb | AAO49724.1 |
                                neuregulin 1 isoform 4 [Homo sapiens]
          Length = 58
 Score = 79.5 bits (180), Expect = 5e-15
 Identities = 23/23 (100%), Positives = 23/23 (100%)
Query: 1 KCQPGFTGARCTENVPMKVQNQE 23
          KCQPGFTGARCTENVPMKVQNQE
Sbjct: 22 KCQPGFTGARCTENVPMKVQNQE 44
🗐 >gi|284149|pir||A43273 heregulin precursor, splice form alpha - human
          Length = 640
 Score = 79.5 bits (180), Expect = 5e-15
 Identities = 23/23 (100%), Positives = 23/23 (100%)
           KCQPGFTGARCTENVPMKVQNQE 23
Query: 1
           KCQPGFTGARCTENVPMKVQNQE
Sbjct: 211 KCQPGFTGARCTENVPMKVQNQE 233
____ >gi |7513201 |pir | | I38405
                            neu differentiation factor - human (fragment)
 gi | 408405 | gb | AAA19952.1 |
                            neu differentiation factor
          Length = 125
 Score = 79.5 bits (180), Expect = 5e-15
 Identities = 23/23 (100%), Positives = 23/23 (100%)
           KCQPGFTGARCTENVPMKVQNQE 23
Query: 1
           KCOPGFTGARCTENVPMKVONOE
Sbjct: 89 KCQPGFTGARCTENVPMKVQNQE 111
____|>gi|7669526|ref|NP_039258.1|
                                   neuregulin 1 isoform HRG-alpha; heregulin, alpha (4
          p185-activator); glial growth factor; neu
           differentiation factor; sensory and motor neuron derived
           factor [Homo sapiens]
 gi|9297018|sp|Q02297|NRG1_HUMAN
                                 Pro-neuregulin-1 precursor (Pro-NRG1) [Contains: Ne
           differentiation factor) (Heregulin) (HRG) (Breast cancer
           cell differentiation factor p45) (Acetylcholine receptor
           inducing activity) (ARIA) (Sensory and motor
          neuron-derived factor) (Glial growth factor)]
 gi | 183993 | gb | AAA58638.1 |
                             heregulin-alpha
         Length = 640
 Score = 79.5 bits (180), Expect = 5e-15
 Identities = 23/23 (100%), Positives = 23/23 (100%)
          KCQPGFTGARCTENVPMKVQNQE 23
Query: 1
           KCQPGFTGARCTENVPMKVQNQE
Sbjct: 211 KCQPGFTGARCTENVPMKVQNQE 233
gi |408401 | gb | AAA19950.1 |
                           neu differentiation factor
         Length = 350
 Score = 79.5 bits (180), Expect = 5e-15
 Identities = 23/23 (100%), Positives = 23/23 (100%)
Query: 1 KCQPGFTGARCTENVPMKVQNQE 23
```

KCQPGFTGARCTENVPMKVQNQE

```
Sbjct: 18 KCQPGFTGARCTENVPMKVQNQE 40
 __|>gi|7669520|ref|NP_039254.1|
                                   neuregulin 1 isoform ndf43; heregulin, alpha (45kD,
            p185-activator); glial growth factor; neu
            differentiation factor; sensory and motor neuron derived
            factor [Homo sapiens]
 gi|7513199|pir||I38404
                           neu differentiation factor - human
 gi | 408403 | gb | AAA19951.1 |
                               neu differentiation factor
           Length = 462
 Score = 79.5 bits (180), Expect = 5e-15
 Identities = 23/23 (100%), Positives = 23/23 (100%)
Query: 1
            KCQPGFTGARCTENVPMKVQNQE 23
            KCQPGFTGARCTENVPMKVQNQE
Sbjct: 211 KCQPGFTGARCTENVPMKVQNQE 233
 ____] >gi | 22004079 | tpg | DAA00048.1 |
                                   TPA: neuregulin 1 isoform HRG-alpha [Homo sapiens]
           Length = 640
 Score = 79.5 \text{ bits } (180), \text{ Expect} = 5e-15
 Identities = 23/23 (100%), Positives = 23/23 (100%)
           KCQPGFTGARCTENVPMKVQNQE 23
Query: 1
            KCQPGFTGARCTENVPMKVONOE
Sbjct: 211 KCQPGFTGARCTENVPMKVQNQE 233
                           S Heregulin-Alpha Epidermal Growth Factor-Like Domain, Nmr,
_____>gi | 1633217 | pdb | 1HAF |
          Minimized Average Structure
                         S Heregulin-Alpha Epidermal Growth Factor-Like Domain, Nmr, 2
 gi | 1633218 | pdb | 1HAE |
          Structures
          Length = 63
 Score = 79.5 bits (180), Expect = 5e-15
 Identities = 23/23 (100%), Positives = 23/23 (100%)
Query: 1 KCQPGFTGARCTENVPMKVQNQE 23
          KCQPGFTGARCTENVPMKVQNQE
Sbjct: 35 KCQPGFTGARCTENVPMKVQNQE 57
>gi|640060|pdb|1HRE| S Heregulin-Alpha (Epidermal Growth Factor-Like Domain) (Nm1
          Minimized Average Structure)
                        S Heregulin-Alpha (Epidermal Growth Factor-Like Domain) (Nmr,
 gi | 640061 | pdb | 1HRF |
          Structures)
          Length = 67
 Score = 79.5 bits (180), Expect = 5e-15
 Identities = 23/23 (100%), Positives = 23/23 (100%)
Query: 1 KCQPGFTGARCTENVPMKVQNQE 23
          KCQPGFTGARCTENVPMKVQNQE
Sbjct: 37 KCQPGFTGARCTENVPMKVQNQE 59
____ >gi | 22004076 | tpg | DAA00045.1 |
                                   TPA: neuregulin 1 isoform ndf43 [Homo sapiens]
          Length = 462
Score = 79.5 bits (180), Expect = 5e-15
 Identities = 23/23 (100%), Positives = 23/23 (100%)
Query: 1
           KCQPGFTGARCTENVPMKVQNQE 23
           KCQPGFTGARCTENVPMKVQNOE
```

```
Sbjct: 211 KCQPGFTGARCTENVPMKVQNQE 233
                                 neu differentiation factor
_____>gi | 408399 | gb | AAA19949.1
          Length = 422
Score = 75.3 bits (170), Expect = 9e-14
Identities = 22/23 (95%), Positives = 22/23 (95%)
Query: 1
           KCOPGFTGARCTENVPMKVQNQE 23
           KCQPGFTGARCTENVPMKVQ QE
Sbjct: 211 KCQPGFTGARCTENVPMKVQTQE 233
                                 neu differentiation factor
_____>gi | 408383 | gb | AAA19941.1 |
                               neu differentiation factor
 gi | 408385 | gb | AAA19942.1 |
          Length = 461
 Score = 75.3 bits (170), Expect = 9e-14
 Identities = 22/23 (95%), Positives = 22/23 (95%)
Query: 1
           KCOPGFTGARCTENVPMKVQNQE 23
           KCOPGFTGARCTENVPMKVQ QE
Sbjct: 211 KCQPGFTGARCTENVPMKVQTQE 233
                             neu differentiation factor - rat
jgi|7514023|pir||I61719
                              neu differentiation factor
 gi | 408389 | gb | AAA19944.1 |
                               neu differentiation factor
 gi | 408397 | gb | AAA19948.1 |
          Length = 639
 Score = 75.3 bits (170), Expect = 9e-14
 Identities = 22/23 (95%), Positives = 22/23 (95%)
           KCQPGFTGARCTENVPMKVQNQE 23
Query: 1
           KCQPGFTGARCTENVPMKVQ QE
Sbjct: 211 KCQPGFTGARCTENVPMKVQTQE 233
>gi|11066040|gb|AAG28428.1|AF194439 1 SMDF neuregulin alpha 2a [Rattus norvegicu
          Length = 695
 Score = 75.3 bits (170), Expect = 9e-14
 Identities = 22/23 (95%), Positives = 22/23 (95%)
           KCQPGFTGARCTENVPMKVQNQE 23
Query: 1
           KCQPGFTGARCTENVPMKVQ QE
Sbjct: 267 KCQPGFTGARCTENVPMKVQTQE 289
                                              SMDF neuregulin alpha 2b [Rattus norvegicu
_____>gi | 11066042 | gb | AAG28429.1 | AF194440 1
          Length = 298
 Score = 75.3 bits (170), Expect = 9e-14
 Identities = 22/23 (95%), Positives = 22/23 (95%)
           KCQPGFTGARCTENVPMKVQNQE 23
Query: 1
            KCQPGFTGARCTENVPMKVQ QE
Sbjct: 81 KCQPGFTGARCTENVPMKVQTQE 103
                                neuregulin [Mesocricetus auratus]
 gi | 2459765 | gb | AAB71812.1
           Length = 461
 Score = 75.3 bits (170), Expect = 9e-14
 Identities = 22/23 (95%), Positives = 22/23 (95%)
```

```
KCQPGFTGARCTENVPMKVQNQE 23
Query: 1
           KCQPGFTGARCTENVPMKVQ QE
Sbjct: 211 KCQPGFTGARCTENVPMKVQTQE 233
 __|>gi|2135345|pir||S62676
                             heregulin isoform alpha 2 - human (fragments)
          Length = 125
 Score = 57.5 bits (128), Expect = 2e-08
 Identities = 17/18 (94%), Positives = 17/18 (94%)
Query: 1
           KCQPGFTGARCTENVPMK 18
           KCQP FTGARCTENVPMK
Sbjct: 108 KCQPQFTGARCTENVPMK 125
 >gi | 9297012 | sp | 093383 | NRG1 | XENLA | Pro-neuregulin-1 precursor (Pro-NRG1) [Contains:
 gi 3328217 gb AAC26804.1 neuregulin alpha-1 [Xenopus laevis]
          Length = 677
 Score = 43.5 bits (95), Expect = 3e-04
 Identities = 14/19 (73%), Positives = 17/19 (89%)
Query: 1
           KCQPGFTGARCTENVPMKV 19
           KC+PGFTGARCTE P++V
Sbjct: 221 KCKPGFTGARCTETDPLRV 239
| >gi|8132060|gb|AAF73197.1|AF152001_1 Notch3 [Danio rerio]
          Length = 2468
 Score = 33.3 bits (71), Expect = 0.38
 Identities = 13/21 (61%), Positives = 14/21 (66%), Gaps = 6/21 (28%)
Query: 2
           CQPGFTGARC-TE----NVP 16
           C PGFTGARC TE
Sbjct: 888 CLPGFTGARCATELNECQSVP 908
 Score = 28.2 bits (59), Expect =
 Identities = 8/10 (80%), Positives = 8/10 (80%)
Query: 2
            CQPGFTGARC 11
            C PGFTG RC
Sbjct: 1210 CPPGFTGERC 1219
 Score = 28.2 bits (59), Expect =
 Identities = 8/10 (80%), Positives = 8/10 (80%)
Query: 2
           CQPGFTGARC 11
           CQPGFTG C
Sbjct: 471 CQPGFTGTMC 480
 Score = 26.9 bits (56), Expect =
                                    31
 Identities = 9/13 (69%), Positives = 11/13 (84%), Gaps = 1/13 (7%)
Query: 2
           CQPGFTGARCTEN 14
           C+PG+TG RC EN
Sbjct: 546 CEPGYTGYRC-EN 557
 Score = 24.4 bits (50), Expect =
 Identities = 10/15 (66%), Positives = 11/15 (73%)
Query: 2
          CQPGFTGARCTENVP 16
```

```
C+PGFTG C NVP
Sbjct: 926 CKPGFTGLLCETNVP 940
 Score = 24.0 bits (49), Expect =
 Identities = 7/10 (70%), Positives = 9/10 (90%)
Query: 2
           CQPGFTGARC 11
           C+PGFTG +C
Sbjct: 621 CKPGFTGPQC 630
 Score = 21.4 bits (43), Expect = 1415
 Identities = 6/7 (85%), Positives = 7/7 (100%)
Query: 2
            CQPGFTG 8
            C+PGFTG
Sbjct: 1250 CKPGFTG 1256
 Score = 20.2 \text{ bits } (40), \text{ Expect = } 3419
 Identities = 7/12 (58%), Positives = 8/12 (66%), Gaps = 2/12 (16%)
Query: 2
           CQ--PGFTGARC 11
           CQ
                G+TG RC
Sbjct: 393 CQCGRGYTGPRC 404
 Score = 19.3 bits (38), Expect = 6156
 Identities = 6/10 (60%), Positives = 7/10 (70%)
            CQPGFTGARC 11
Query: 2
            C G+TG RC
Sbjct: 1002 CPKGYTGPRC 1011
 Score = 19.3 bits (38), Expect = 6156
 Identities = 9/28 (32%), Positives = 9/28 (32%), Gaps = 17/28 (60%)
           CQPGF-----TGARCT 12
Query: 2
           CQ GF
                                  GARCT
Sbjct: 85 CQRGFRGQDCSLVDACATSPCANGARCT 112
 Score = 18.9 bits (37), Expect = 8260
 Identities = 5/5 (100%), Positives = 5/5 (100%)
Query: 8
            GARCT 12
            GARCT
Sbjct: 1323 GARCT 1327
 Score = 18.5 bits (36), Expect = 11083
 Identities = 8/14 (57%), Positives = 9/14 (64%)
Query: 2
           CQPGFTGARCTENV 15
           C PGF G C +NV
Sbjct: 200 CLPGFRGHNCEDNV 213
- >gi 21361989 ref NP 078776.2
                                     likely ortholog of mouse polydom [Homo sapiens]
gi | 14042859 | dbj | BAB55420.1 |
                                 unnamed protein product [Homo sapiens]
         Length = 1316
Score = 32.9 bits (70), Expect = 0.51
Identities = 11/14 (78%), Positives = 12/14 (85%), Gaps = 1/14 (7%)
```

```
Query: 1
            KCOPGFTGARC-TE 13
            KCQPGF+G RC TE
Sbjct: 1175 KCQPGFSGKRCETE 1188
 Score = 27.8 bits (58), Expect =
 Identities = 10/15 (66%), Positives = 11/15 (73%)
Query: 1
            KCQPGFTGARCTENV 15
            KC PGF G RC +NV
Sbjct: 1099 KCPPGFLGTRCGKNV 1113
 Score = 25.2 bits (52), Expect =
 Identities = 8/14 (57%), Positives = 10/14 (71%)
Query: 2
            COPGFTGARCTENV 15
            C G+TG RC EN+
Sbjct: 1024 CPSGYTGQRCEENI 1037
 Score = 20.2 \text{ bits } (40), \text{ Expect} = 3419
 Identities = 6/10 (60%), Positives = 7/10 (70%)
Query: 2
            CQPGFTGARC 11
            C GFTG+ C
Sbjct: 1138 CAAGFTGSHC 1147
 Score = 17.6 bits (34), Expect = 19953
 Identities = 4/5 (80%), Positives = 4/5 (80%)
Query: 2
           CQPGF 6
           C PGF
Sbjct: 173 CHPGF 177
_____>gi|12738842|ref|NP 073725.1|
                                     polydomain protein; D430029009Rik [Mus musculus]
 gi | 11177164 | gb | AAG32160.1 | AF206329_1
                                           polydom protein [Mus musculus]
          Length = 3567
 Score = 32.9 \text{ bits } (70), \text{ Expect = } 0.51
 Identities = 11/14 (78%), Positives = 12/14 (85%), Gaps = 1/14 (7%)
            KCQPGFTGARC-TE 13
Query: 1
            KCQPGF+G RC TE
Sbjct: 1407 KCQPGFSGHRCETE 1420
 Score = 27.8 bits (58), Expect =
 Identities = 10/15 (66%), Positives = 11/15 (73%)
            KCQPGFTGARCTENV 15
Query: 1
            KC PGF G RC +NV
Sbjct: 1331 KCPPGFLGTRCEKNV 1345
 Score = 20.6 bits (41), Expect = 2548
 Identities = 8/12 (66%), Positives = 8/12 (66%), Gaps = 2/12 (16%)
Query: 2
            CQ-P-GFTGARC 11
            CQ P GFTG C
Sbjct: 1368 CQCPAGFTGTHC 1379
```

```
Score = 20.2 bits (40), Expect = 3419
 Identities = 6/10 (60%), Positives = 8/10 (80%)
            CQPGFTGARC 11
Query: 2
            C PG+TG +C
Sbjct: 1218 CPPGYTGLKC 1227
 Score = 18.5 bits (36), Expect = 11083
 Identities = 6/10 (60%), Positives = 8/10 (80%)
Query: 2
            CQPGFTGARC 11
            C G+TG+RC
Sbjct: 3518 CPTGWTGSRC 3527
____>gi | 85085 | pir | A24420
                         notch protein - fruit fly (Drosophila melanogaster)
 gi | 157993 | gb | AAA28725.1 |
                              developmental protein
          Length = 2703
 Score = 32.0 bits (68), Expect = 0.91
 Identities = 9/10 (90%), Positives = 9/10 (90%)
Query: 2
            CQPGFTGARC 11
            CQPGF GARC
Sbjct: 1285 CQPGFVGARC 1294
 Score = 28.2 bits (59), Expect =
                                     13
 Identities = 11/17 (64%), Positives = 12/17 (70%), Gaps = 2/17 (11%)
Query: 1
           KCQ--PGFTGARCTENV 15
           KCQ PGFTG C +NV
Sbjct: 700 KCQCVPGFTGQHCEKNV 716
 Score = 25.2 bits (52), Expect =
                                   100
 Identities = 7/7 (100%), Positives = 7/7 (100%)
Query: 5
           GFTGARC 11
           GFTGARC
Sbjct: 555 GFTGARC 561
 Score = 24.0 bits (49), Expect = 243
 Identities = 7/10 (70%), Positives = 8/10 (80%)
Query: 2
           CQPGFTGARC 11
           C PGFTG +C
Sbjct: 514 CMPGFTGTQC 523
 Score = 23.1 bits (47), Expect = 437
 Identities = 7/10 (70%), Positives = 8/10 (80%)
Query: 2
           CQPGFTGARC 11
           C PG+TG RC
Sbjct: 779 CPPGYTGKRC 788
 Score = 22.7 bits (46), Expect = 586
 Identities = 7/10 (70%), Positives = 7/10 (70%)
Query: 2
           CQPGFTGARC 11
           C GFTG RC
Sbjct: 476 CSQGFTGPRC 485
```

```
Score = 22.3 bits (45), Expect = 786
 Identities = 8/14 (57%), Positives = 10/14 (71%)
Query: 2
            COPGFTGARCTENV 15
            C GFTG +C+E V
Sbjct: 1086 CPSGFTGKQCSEYV 1099
 Score = 21.8 bits (44), Expect = 1055
 Identities = 7/10 (70%), Positives = 7/10 (70%)
Query: 2
           CQPGFTGARC 11
           C PGFTG C
Sbjct: 205 CPPGFTGDTC 214
 Score = 21.0 bits (42), Expect = 1899
 Identities = 7/12 (58%), Positives = 9/12 (75%), Gaps = 2/12 (16%)
           CQ--PGFTGARC 11
Query: 2
           CQ PG+TG +C
Sbjct: 815 CQCMPGYTGQKC 826
 Score = 21.0 bits (42), Expect = 1899
 Identities = 6/10 (60%), Positives = 7/10 (70%)
Query: 2
           CQPGFTGARC 11
           C PG+TG C
Sbjct: 590 CPPGYTGTSC 599
 Score = 19.3 bits (38), Expect = 6156
 Identities = 7/11 (63%), Positives = 9/11 (81%), Gaps = 1/11 (9%)
           GFTGARC-TEN 14
Query: 5
           G+TG RC T+N
Sbjct: 169 GYTGERCETKN 179
 Score = 18.9 bits (37), Expect = 8260
 Identities = 5/7 (71%), Positives = 6/7 (85%)
Query: 2
           CQPGFTG 8
           C PG+TG
Sbjct: 627 CDPGYTG 633
                                     Notch CG3936-PA [Drosophila melanogaster]
____>gi|24639454|ref|NP_476859.2|
                                    Neurogenic locus Notch protein precursor
 gi | 17380387 | sp | P07207 | NOTC DROME
                                 CG3936-PA [Drosophila melanogaster]
 gi | 10728440 | gb | AAF45848.2 |
          Length = 2703
 Score = 32.0 bits (68), Expect = 0.91
 Identities = 9/10 (90%), Positives = 9/10 (90%)
            CQPGFTGARC 11
Query: 2
            COPGF GARC
Sbjct: 1285 CQPGFVGARC 1294
 Score = 28.2 bits (59), Expect =
                                     13
 Identities = 11/17 (64%), Positives = 12/17 (70%), Gaps = 2/17 (11%)
```

```
Query: 1
            KCQ--PGFTGARCTENV 15
            KCQ PGFTG C +NV
 Sbjct: 700 KCQCVPGFTGQHCEKNV 716
  Score = 25.2 bits (52), Expect =
  Identities = 7/7 (100%), Positives = 7/7 (100%)
 Query: 5
            GFTGARC 11
            GFTGARC
 Sbjct: 555 GFTGARC 561
  Score = 24.0 bits (49), Expect =
 Identities = 7/10 (70%), Positives = 8/10 (80%)
 Query: 2
            CQPGFTGARC 11
            C PGFTG +C
Sbjct: 514 CMPGFTGTQC 523
 Score = 23.1 bits (47), Expect =
 Identities = 7/10 (70%), Positives = 8/10 (80%)
Query: 2
           CQPGFTGARC 11
           C PG+TG RC
Sbjct: 779 CPPGYTGKRC 788
 Score = 22.7 bits (46), Expect = 586
 Identities = 7/10 (70%), Positives = 7/10 (70%)
           CQPGFTGARC 11
Query: 2
           C GFTG RC
Sbjct: 476 CSQGFTGPRC 485
 Score = 22.3 bits (45), Expect = 786
 Identities = 8/14 (57%), Positives = 10/14 (71%)
Query: 2
            CQPGFTGARCTENV 15
            C GFTG +C+E V
Sbjct: 1086 CPSGFTGKQCSEYV 1099
 Score = 21.8 bits (44), Expect = 1055
 Identities = 7/10 (70%), Positives = 7/10 (70%)
Query: 2
           CQPGFTGARC 11
           C PGFTG C
Sbjct: 205 CPPGFTGDTC 214
 Score = 21.0 \text{ bits } (42), \text{ Expect} = 1899
 Identities = 7/12 (58%), Positives = 9/12 (75%), Gaps = 2/12 (16%)
Query: 2
           CQ--PGFTGARC 11
           CQ PG+TG +C
Sbjct: 815 CQCMPGYTGQKC 826
 Score = 21.0 bits (42), Expect = 1899
 Identities = 6/10 (60%), Positives = 7/10 (70%)
Query: 2 CQPGFTGARC 11
```

```
C PG+TG C
Sbjct: 590 CPPGYTGTSC 599
 Score = 19.3 bits (38), Expect = 6156
 Identities = 7/11 (63%), Positives = 9/11 (81%), Gaps = 1/11 (9%)
Query: 5
          GFTGARC-TEN 14
           G+TG RC T+N
Sbjct: 169 GYTGERCETKN 179
 Score = 18.9 bits (37), Expect = 8260
 Identities = 5/7 (71%), Positives = 6/7 (85%)
          CQPGFTG 8
Query: 2
           C PG+TG
Sbjct: 627 CDPGYTG 633
>gi|157988|gb|AAB59220.1| Notch growth factor [Drosophila melanogaster]
          Length = 2703
 Score = 32.0 bits (68), Expect = 0.91
 Identities = 9/10 (90%), Positives = 9/10 (90%)
Query: 2
            CQPGFTGARC 11
            COPGF GARC
Sbjct: 1285 CQPGFVGARC 1294
 Score = 28.2 bits (59), Expect =
 Identities = 11/17 (64%), Positives = 12/17 (70%), Gaps = 2/17 (11%)
          KCO--PGFTGARCTENV 15
Query: 1
          KCO PGFTG C +NV
Sbjct: 700 KCQCVPGFTGQHCEKNV 716
 Score = 25.2 bits (52), Expect =
 Identities = 7/7 (100%), Positives = 7/7 (100%)
          GFTGARC 11
Query: 5
          GFTGARC
Sbjct: 555 GFTGARC 561
 Score = 24.0 bits (49), Expect =
                                    243
 Identities = 7/10 (70%), Positives = 8/10 (80%)
Query: 2
          CQPGFTGARC 11
          C PGFTG +C
Sbjct: 514 CMPGFTGTQC 523
 Score = 23.1 bits (47), Expect = 437
 Identities = 7/10 (70%), Positives = 8/10 (80%)
          CQPGFTGARC 11
Query: 2
          C PG+TG RC
Sbjct: 779 CPPGYTGKRC 788
Score = 22.7 bits (46), Expect =
 Identities = 7/10 (70%), Positives = 7/10 (70%)
```

```
Query: 2
          CQPGFTGARC 11
           C GFTG RC
Sbjct: 476 CSQGFTGPRC 485
 Score = 22.3 bits (45), Expect =
 Identities = 8/14 (57%), Positives = 10/14 (71%)
Query: 2
           COPGFTGARCTENV 15
            C GFTG +C+E V
Sbjct: 1086 CPSGFTGKQCSEYV 1099
 Score = 21.8 bits (44), Expect = 1055
 Identities = 7/10 (70%), Positives = 7/10 (70%)
          CQPGFTGARC 11
Query: 2
           C PGFTG C
Sbjct: 205 CPPGFTGDTC 214
 Score = 21.0 bits (42), Expect = 1899
 Identities = 7/12 (58%), Positives = 9/12 (75%), Gaps = 2/12 (16%)
          CQ--PGFTGARC 11
Query: 2
          CQ PG+TG +C
Sbjct: 815 CQCMPGYTGQKC 826
 Score = 21.0 bits (42), Expect = 1899
 Identities = 6/10 (60\%), Positives = 7/10 (70\%)
          CQPGFTGARC 11
Query: 2
          C PG+TG C
Sbjct: 590 CPPGYTGTSC 599
 Score = 19.3 bits (38), Expect = 6156
 Identities = 7/11 (63%), Positives = 9/11 (81%), Gaps = 1/11 (9%)
          GFTGARC-TEN 14
Query: 5
          G+TG RC T+N
Sbjct: 169 GYTGERCETKN 179
Score = 18.9 bits (37), Expect = 8260 Identities = 5/7 (71%), Positives = 6/7 (85%)
Query: 2
          CQPGFTG 8
           C PG+TG
Sbjct: 627 CDPGYTG 633
gi|18182323|gb|AAL65131.1|AF406641 1 crumbs-like protein 1 precursor [Mus musculu
         Length = 1405
 Score = 32.0 \text{ bits } (68), \text{ Expect = } 0.91
 Identities = 10/14 (71%), Positives = 11/14 (78%)
Query: 2
          CQPGFTGARCTENV 15
          CQPGFTG C E+V
Sbjct: 384 CQPGFTGIHCEEDV 397
Score = 23.5 bits (48), Expect =
```

```
Identities = 7/12 (58%), Positives = 9/12 (75%)
            PGFTGARCTENV 15
Query: 4
            PGFTG C E++
Sbjct: 1286 PGFTGEWCEEDI 1297
 Score = 22.3 bits (45), Expect = 786
 Identities = 7/10 (70%), Positives = 9/10 (90%)
Query: 2
           CQPGFTGARC 11
           C+PG+TGA C
Sbjct: 326 CRPGYTGALC 335
 Score = 21.0 bits (42), Expect = 1899
 Identities = 6/10 (60%), Positives = 8/10 (80%)
            CQPGFTGARC 11
Query: 2
            C+PG+TG C
Sbjct: 1201 CEPGYTGVNC 1210
                                 EG:140G11.1 [Drosophila melanogaster]
_____ >gi | 4467343 | emb | CAB37610.1 |
          Length = 2704
 Score = 32.0 bits (68), Expect = 0.91
 Identities = 9/10 (90%), Positives = 9/10 (90%)
            CQPGFTGARC 11
Query: 2
            CQPGF GARC
Sbjct: 1285 CQPGFVGARC 1294
                                    13
 Score = 28.2 bits (59), Expect =
 Identities = 11/17 (64%), Positives = 12/17 (70%), Gaps = 2/17 (11%)
           KCQ--PGFTGARCTENV 15
Query: 1
           KCQ PGFTG C +NV
Sbjct: 700 KCQCVPGFTGQHCEKNV 716
 Score = 25.2 bits (52), Expect = 100
 Identities = 7/7 (100%), Positives = 7/7 (100%)
Query: 5
           GFTGARC 11
           GFTGARC
Sbjct: 555 GFTGARC 561
 Score = 24.0 bits (49), Expect = 243
 Identities = 7/10 (70%), Positives = 8/10 (80%)
           COPGFTGARC 11
Query: 2
           C PGFTG +C
Sbjct: 514 CMPGFTGTQC 523
 Score = 23.1 bits (47), Expect = 437
 Identities = 7/10 (70%), Positives = 8/10 (80%)
Query: 2
           COPGFTGARC 11
           C PG+TG RC
Sbjct: 779 CPPGYTGKRC 788
```

```
Score = 22.7 bits (46), Expect = 586
 Identities = 7/10 (70%), Positives = 7/10 (70%)
           CQPGFTGARC 11
Query: 2
           C GFTG RC
Sbjct: 476 CSQGFTGPRC 485
 Score = 22.3 bits (45), Expect = 786
 Identities = 8/14 (57%), Positives = 10/14 (71%)
            CQPGFTGARCTENV 15
Query: 2
            C GFTG +C+E V
Sbjct: 1086 CPSGFTGKQCSEYV 1099
 Score = 21.8 bits (44), Expect = 1055
 Identities = 7/10 (70%), Positives = 7/10 (70%)
           CQPGFTGARC 11
Query: 2
           C PGFTG C
Sbjct: 205 CPPGFTGDTC 214
 Score = 21.0 bits (42), Expect = 1899
 Identities = 7/12 (58%), Positives = 9/12 (75%), Gaps = 2/12 (16%)
           CQ--PGFTGARC 11
Query: 2
           CQ PG+TG +C
Sbjct: 815 CQCMPGYTGQKC 826
 Score = 21.0 bits (42), Expect = 1899
 Identities = 6/10 (60%), Positives = 7/10 (70%)
Query: 2
           CQPGFTGARC 11
           C PG+TG C
Sbjct: 590 CPPGYTGTSC 599
 Score = 19.3 bits (38), Expect = 6156
 Identities = 7/11 (63%), Positives = 9/11 (81%), Gaps = 1/11 (9%)
Query: 5
           GFTGARC-TEN 14
           G+TG RC T+N
Sbjct: 169 GYTGERCETKN 179
 Score = 18.9 bits (37), Expect = 8260
 Identities = 5/7 (71%), Positives = 6/7 (85%)
           COPGFTG 8
Query: 2
           C PG+TG
Sbjct: 627 CDPGYTG 633
                                 CRB1 isoform II precursor [Homo sapiens]
 ____>gi | 18175295 | gb | AAL10682.1 |
          Length = 1406
 Score = 32.0 \text{ bits } (68), \text{ Expect = } 0.91
 Identities = 10/14 (71%), Positives = 11/14 (78%)
           CQPGFTGARCTENV 15
Query: 2
           CQPGFTG C E+V
Sbjct: 385 CQPGFTGIHCEEDV 398
```

```
Score = 24.4 bits (50), Expect =
 Identities = 7/10 (70%), Positives = 8/10 (80%)
            COPGFTGARC 11
Query: 2
            C+PGFTG C
Sbjct: 1285 CRPGFTGEWC 1294
 Score = 21.4 bits (43), Expect = 1415
 Identities = 6/8 (75%), Positives = 8/8 (100%)
           PGFTGARC 11
Query: 4
           PG+TGA+C
Sbjct: 329 PGYTGAQC 336
 Score = 21.0 bits (42), Expect = 1899
 Identities = 6/10 (60%), Positives = 8/10 (80%)
            COPGFTGARC 11
Query: 2
            C+PG+TG C
Sbjct: 1202 CEPGYTGVNC 1211
 Score = 20.2 bits (40), Expect = 3419
 Identities = 6/11 (54%), Positives = 8/11 (72%)
Query: 1
           KCQPGFTGARC 11
           KC PG++G C
Sbjct: 97 KCPPGYSGTIC 107
 Score = 18.0 \text{ bits } (35), Expect = 14871
 Identities = 5/7 (71%), Positives = 5/7 (71%)
Query: 5
           GFTGARC 11
           GFTG C
Sbjct: 292 GFTGTHC 298
                                    crumbs homolog 1 [Homo sapiens]
_____>qi|6912322|ref|NP_036208.1|
                                       Crumbs protein homolog 1 precursor
 gi | 17374421 | sp | P82279 | CRBH_HUMAN
 gi | 6014482 | gb | AAF01361.1 | AF154671_1
                                          CRB1 [Homo sapiens]
                                 CRB1 isoform I precursor [Homo sapiens]
 gi|18175289|gb|AAL10681.1|
          Length = 1376
 Score = 32.0 bits (68), Expect = 0.91
 Identities = 10/14 (71%), Positives = 11/14 (78%)
Query: 2
           COPGFTGARCTENV 15
            COPGFTG C E+V
Sbjct: 385 CQPGFTGIHCEEDV 398
 Score = 24.4 bits (50), Expect =
 Identities = 7/10 (70%), Positives = 8/10 (80%)
            CQPGFTGARC 11
Query: 2
             C+PGFTG C
Sbjct: 1285 CRPGFTGEWC 1294
 Score = 21.4 bits (43), Expect = 1415
 Identities = 6/8 (75%), Positives = 8/8 (100%)
```

```
PGFTGARC 11
Query: 4
          PG+TGA+C
Sbjct: 329 PGYTGAQC 336
 Score = 21.0 bits (42), Expect = 1899
 Identities = 6/10 (60%), Positives = 8/10 (80%)
           CQPGFTGARC 11
Query: 2
           C+PG+TG C
Sbjct: 1202 CEPGYTGVNC 1211
 Score = 20.2 \text{ bits } (40), \text{ Expect = } 3419
 Identities = 6/11 (54%), Positives = 8/11 (72%)
          KCQPGFTGARC 11
Query: 1
           KC PG++G C
          KCPPGYSGTIC 107
Sbjct: 97
 Score = 18.0 bits (35), Expect = 14871
 Identities = 5/7 (71%), Positives = 5/7 (71%)
          GFTGARC 11
Query: 5
           GFTG C
Sbjct: 292 GFTGTHC 298
Length = 610
 Score = 30.8 bits (65), Expect = 2.2
 Identities = 14/24 (58%), Positives = 14/24 (58%), Gaps = 6/24 (25%)
           CQPGFTGARCTENVPMKV--QNQE 23
Query: 2
           C PGFTG RC E V V Q QE
Sbjct: 164 CHPGFTGLRC-EQV---VTCQAQE 183
 Score = 17.6 bits (34), Expect = 19953
 Identities = 4/5 (80%), Positives = 5/5 (100%)
Query: 19 VQNQE 23
          +QNQE
Sbjct: 50 IQNQE 54
_____>gi|7459690|pir||T09059
                           notch4 - mouse
 gi | 2564947 | gb | AAB82004.1 |
                            notch4 [Mus musculus]
          Length = 1964
 Score = 30.8 bits (65), Expect = 2.2
 Identities = 9/10 (90\%), Positives = 9/10 (90\%)
           COPGFTGARC 11
Query: 2
           C PGFTGARC
Sbjct: 536 CLPGFTGARC 545
 Score = 25.2 bits (52), Expect =
                                   100
 Identities = 7/10 (70%), Positives = 9/10 (90%)
Query: 2
           CQPGFTGARC 11
           C PG+TG+RC
Sbjct: 460 CLPGYTGSRC 469
```

```
Score = 23.5 bits (48), Expect = 325
 Identities = 7/10 (70%), Positives = 7/10 (70%)
Query: 2
          CQPGFTGARC 11
          C GFTG RC
Sbjct: 102 CPSGFTGDRC 111
Score = 22.7 bits (46), Expect =
                                  586
 Identities = 10/16 (62%), Positives = 12/16 (75%), Gaps = 2/16 (12%)
          CQPGFTGARCTENVPM 17
Query: 2
           C+PGFTG C E VP+
Sbjct: 612 CRPGFTGQLC-E-VPL 625
 Score = 22.3 bits (45), Expect = 786
 Identities = 7/10 (70%), Positives = 7/10 (70%)
          CQPGFTGARC 11
Query: 2
           C PGF G RC
Sbjct: 990 CPPGFVGLRC 999
 Score = 21.8 bits (44), Expect = 1055
 Identities = 6/10 (60%), Positives = 9/10 (90%)
Query: 2
          CQPGFTGARC 11
           CQPG++G+ C
Sbjct: 417 CQPGYSGSTC 426
 Score = 21.4 bits (43), Expect = 1415
 Identities = 11/18 (61%), Positives = 11/18 (61%), Gaps = 4/18 (22%)
            CO--PGFTGARCTENVPM 17
Query: 2
            CQ PG TG RC E V M
Sbjct: 1028 CQCLPGHTGQRC-E-VEM 1043
 Score = 21.4 bits (43), Expect = 1415
 Identities = 6/7 (85%), Positives = 6/7 (85%)
Query: 2
           CQPGFTG 8
           C PGFTG
Sbjct: 261 CPPGFTG 267
 Score = 20.6 bits (41), Expect = 2548
 Identities = 6/10 (60%), Positives = 8/10 (80%)
           CQPGFTGARC 11
Query: 2
           C PG+TG+ C
Sbjct: 829 CSPGYTGSSC 838
 Score = 20.2 bits (40), Expect = 3419
 Identities = 6/10 (60%), Positives = 9/10 (90%)
Query: 2
           CQPGFTGARC 11
           C+PG+TG +C
Sbjct: 142 CEPGWTGEQC 151
```

```
___|>gi|6754874|ref|NP_035059.1|
                                    Notch gene homolog 4; Notch gene homolog 4, (Drosor
            musculus]
 gi|2506381|sp|P31695|NTC4 MOUSE
                                    Neurogenic locus notch homolog protein 4 precursor
            [Contains: Transforming protein Int-3]
 gi | 1714084 | gb | AAB38377.1 |
                                [Mus musculus activated Int-3 mammary gene mRNA, comple
            gene product
           Length = 1964
 Score = 30.8 bits (65), Expect = 2.2
 Identities = 9/10 (90%), Positives = 9/10 (90%)
Query: 2
           CQPGFTGARC 11
            C PGFTGARC
Sbjct: 536 CLPGFTGARC 545
 Score = 25.2 bits (52), Expect =
 Identities = 7/10 (70%), Positives = 9/10 (90%)
           CQPGFTGARC 11
Query: 2
           C PG+TG+RC
Sbjct: 460 CLPGYTGSRC 469
 Score = 23.5 bits (48), Expect = 325
 Identities = 7/10 (70%), Positives = 7/10 (70%)
Query: 2
           CQPGFTGARC 11
           C GFTG RC
Sbjct: 102 CPSGFTGDRC 111
 Score = 22.7 bits (46), Expect = 586
 Identities = 10/16 (62%), Positives = 12/16 (75%), Gaps = 2/16 (12%)
Query: 2
           CQPGFTGARCTENVPM 17
           C+PGFTG C E VP+
Sbjct: 612 CRPGFTGQLC-E-VPL 625
 Score = 22.3 bits (45), Expect = 786
 Identities = 7/10 (70%), Positives = 7/10 (70%)
Query: 2
           CQPGFTGARC 11
           C PGF G RC
Sbjct: 990 CPPGFVGLRC 999
 Score = 21.8 bits (44), Expect = 1055
 Identities = 6/10 (60%), Positives = 9/10 (90%)
           CQPGFTGARC 11
Query: 2
           CQPG++G+ C
Sbjct: 417 CQPGYSGSTC 426
 Score = 21.4 bits (43), Expect = 1415
 Identities = 11/18 (61%), Positives = 11/18 (61%), Gaps = 4/18 (22%)
Query: 2
            CQ--PGFTGARCTENVPM 17
            CQ PG TG RC E V M
Sbjct: 1028 CQCLPGHTGQRC-E-VEM 1043
 Score = 21.4 bits (43), Expect = 1415
```

```
Identities = 6/7 (85%), Positives = 6/7 (85%)
          CQPGFTG 8
Query: 2
          C PGFTG
Sbjct: 261 CPPGFTG 267
Score = 20.6 bits (41), Expect = 2548
Identities = 6/10 (60%), Positives = 8/10 (80%)
          CQPGFTGARC 11
Query: 2
          C PG+TG+ C
Sbjct: 829 CSPGYTGSSC 838
 Score = 20.2 bits (40), Expect = 3419
 Identities = 6/10 (60%), Positives = 9/10 (90%)
Query: 2
          CQPGFTGARC 11
          C+PG+TG +C
Sbjct: 142 CEPGWTGEQC 151
Length = 747
 Score = 30.8 bits (65), Expect = 2.2
 Identities = 9/12 (75%), Positives = 10/12 (83%)
Query: 2
          COPGFTGARCTE 13
          C+ GFTG RCTE
Sbjct: 334 CEHGFTGDRCTE 345
 Score = 21.8 bits (44), Expect = 1055
 Identities = 7/12 (58%), Positives = 8/12 (66%)
Query: 2
          CQPGFTGARCTE 13
          C PG+ G RC E
Sbjct: 291 CAPGYIGDRCQE 302
 Score = 21.4 bits (43), Expect = 1415
 Identities = 8/15 (53%), Positives = 10/15 (66%)
Query: 2
          COPGFTGARCTENVP 16
          CQPG+ G C E+ P
Sbjct: 380 CQPGWAGLHCNESCP 394
 Score = 20.6 bits (41), Expect = 2548
 Identities = 6/10 (60%), Positives = 7/10 (70%)
          CQPGFTGARC 11
Query: 2
          C PG+TG C
Sbjct: 423 CAPGYTGPHC 432
 Score = 18.9 bits (37), Expect = 8260
 Identities = 6/10 (60%), Positives = 7/10 (70%)
          CQPGFTGARC 11
Query: 2
          CQ G+ G RC
Sbjct: 552 CQAGWMGTRC 561
```

```
| >gi | 27503754 | gb | AAH42490.1 |
                                   3110045G13Rik protein [Mus musculus]
          Length = 1004
 Score = 30.8 bits (65), Expect = 2.2
 Identities = 9/12 (75%), Positives = 10/12 (83%)
Query: 2
           CQPGFTGARCTE 13
           C+ GFTG RCTE
Sbjct: 334 CEHGFTGDRCTE 345
 Score = 21.8 bits (44), Expect = 1055
 Identities = 7/12 (58%), Positives = 8/12 (66%)
           CQPGFTGARCTE 13
Query: 2
           C PG+ G RC E
Sbjct: 291 CAPGYIGDRCQE 302
 Score = 20.6 bits (41), Expect = 2548
 Identities = 6/10 (60%), Positives = 7/10 (70%)
Query: 2
           CQPGFTGARC 11
           C PG+TG C
Sbjct: 393 CAPGYTGPHC 402
 Score = 18.9 bits (37), Expect = 8260
 Identities = 6/10 (60%), Positives = 7/10 (70%)
Query: 2
           CQPGFTGARC 11
           CQ G+ G RC
Sbjct: 522 CQAGWMGTRC 531
jedi [Mus musculus] >gi|22779881|ref|NP 082736.1|
 gi|17017251|gb|AAL33583.1|AF440279 1
                                          MEGF12 [Mus musculus]
                                 unnamed protein product [Mus musculus]
 gi | 26343539 | dbj | BAC35426.1 |
          Length = 1034
 Score = 30.8 bits (65), Expect = 2.2
 Identities = 9/12 (75%), Positives = 10/12 (83%)
           CQPGFTGARCTE 13
Query: 2
           C+ GFTG RCTE
Sbjct: 334 CEHGFTGDRCTE 345
 Score = 21.8 bits (44), Expect = 1055
 Identities = 7/12 (58%), Positives = 8/12 (66%)
Query: 2
           CQPGFTGARCTE 13
           C PG+ G RC E
Sbjct: 291 CAPGYIGDRCQE 302
 Score = 21.4 bits (43), Expect = 1415
 Identities = 8/15 (53%), Positives = 10/15 (66%)
Query: 2
          CQPGFTGARCTENVP 16
           CQPG+ G C E+ P
Sbjct: 380 CQPGWAGLHCNESCP 394
 Score = 20.6 bits (41), Expect = 2548
```

```
Identities = 6/10 (60%), Positives = 7/10 (70%)
 Query: 2
            CQPGFTGARC 11
            C PG+TG C
 Sbjct: 423 CAPGYTGPHC 432
  Score = 18.9 bits (37), Expect = 8260
  Identities = 6/10 (60%), Positives = 7/10 (70%)
 Query: 2
           CQPGFTGARC 11
            CQ G+ G RC
 Sbjct: 552 CQAGWMGTRC 561
 Length = 1034
  Score = 30.8 bits (65), Expect = 2.2
  Identities = 9/12 (75%), Positives = 10/12 (83%)
 Query: 2
           CQPGFTGARCTE 13
           C+ GFTG RCTE
 Sbjct: 334 CEHGFTGDRCTE 345
  Score = 21.8 bits (44), Expect = 1055
  Identities = 7/12 (58%), Positives = 8/12 (66%)
 Query: 2
           CQPGFTGARCTE 13
           C PG+ G RC E
Sbjct: 291 CAPGYIGDRCQE 302
Score = 21.4 bits (43), Expect = 1415
 Identities = 8/15 (53%), Positives = 10/15 (66%)
Query: 2
           CQPGFTGARCTENVP 16
           CQPG+ G C E+ P
Sbjct: 380 CQPGWAGLHCNESCP 394
 Score = 20.6 bits (41), Expect = 2548
 Identities = 6/10 (60%), Positives = 7/10 (70%)
Query: 2
           CQPGFTGARC 11
           C PG+TG C
Sbjct: 423 CAPGYTGPHC 432
 Score = 18.9 bits (37), Expect = 8260
 Identities = 6/10 (60%), Positives = 7/10 (70%)
          CQPGFTGARC 11
Query: 2
          CQ G+ G RC
Sbjct: 552 CQAGWMGTRC 561
>gi | 1401160 | gb | AAC52630.1 |
         Length = 1964
Score = 30.8 bits (65), Expect = 2.2
Identities = 9/10 (90%), Positives = 9/10 (90%)
          CQPGFTGARC 11
Query: 2
          C PGFTGARC
```

```
Sbjct: 536 CLPGFTGARC 545
 Score = 25.2 bits (52), Expect =
 Identities = 7/10 (70%), Positives = 9/10 (90%)
Query: 2
           CQPGFTGARC 11
           C PG+TG+RC
Sbjct: 460 CLPGYTGSRC 469
 Score = 23.5 bits (48), Expect =
 Identities = 7/10 (70%), Positives = 7/10 (70%)
           CQPGFTGARC 11
Query: 2
           C GFTG RC
Sbjct: 102 CPSGFTGDRC 111
 Score = 22.7 bits (46), Expect =
 Identities = 10/16 (62%), Positives = 12/16 (75%), Gaps = 2/16 (12%)
Query: 2
           CQPGFTGARCTENVPM 17
           C+PGFTG C E VP+
Sbjct: 612 CRPGFTGQLC-E-VPL 625
 Score = 22.3 bits (45), Expect = 786
 Identities = 7/10 (70%), Positives = 7/10 (70%)
Query: 2
           CQPGFTGARC 11
           C PGF G RC
Sbjct: 990 CPPGFVGLRC 999
 Score = 21.8 bits (44), Expect = 1055
 Identities = 6/10 (60%), Positives = 9/10 (90%)
Query: 2
           CQPGFTGARC 11
           CQPG++G+ C
Sbjct: 417 CQPGYSGSTC 426
 Score = 21.4 bits (43), Expect = 1415
 Identities = 11/18 (61%), Positives = 11/18 (61%), Gaps = 4/18 (22%)
Query: 2
            CQ--PGFTGARCTENVPM 17
            CQ PG TG RC E V M
Sbjct: 1028 CQCLPGHTGQRC-E-VEM 1043
 Score = 21.4 \text{ bits } (43), \text{ Expect} = 1415
 Identities = 6/7 (85%), Positives = 6/7 (85%)
Query: 2
           COPGFTG 8
           C PGFTG
Sbjct: 261 CPPGFTG 267
 Score = 20.6 bits (41), Expect = 2548
 Identities = 6/10 (60%), Positives = 8/10 (80%)
Query: 2
           CQPGFTGARC 11
           C PG+TG+ C
Sbjct: 829 CSPGYTGSSC 838
```

```
Score = 20.2 bits (40), Expect = 3419
   Identities = 6/10 (60%), Positives = 9/10 (90%)
             CQPGFTGARC 11
  Query: 2
             C+PG+TG +C
  Sbjct: 142 CEPGWTGEQC 151
  ____|>gi|28498994|ref|XP 192820.2|
                                     similar to Notch gene homolog 3, (Drosophila) [Mus
           Length = 1319
  Score = 29.9 \text{ bits } (63), \text{ Expect = } 4.0
  Identities = 8/10 (80%), Positives = 8/10 (80%)
 Query: 2
            CQPGFTGARC 11
            C PGFTG RC
 Sbjct: 809 CHPGFTGPRC 818
  Score = 27.8 bits (58), Expect = 17
  Identities = 10/14 (71%), Positives = 10/14 (71%), Gaps = 2/14 (14%)
            CQPGFTGARCTENV 15
            CQPGFTG C NV
 Sbjct: 220 CQPGFTGPLC--NV 231
  Score = 21.8 bits (44), Expect = 1055
  Identities = 6/10 (60%), Positives = 8/10 (80%)
 Query: 2
            CQPGFTGARC 11
            C+PG+TG C
 Sbjct: 525 CRPGYTGTHC 534
  Score = 21.8 bits (44), Expect = 1055
  Identities = 6/12 (50%), Positives = 11/12 (91%)
Query: 2
            CQPGFTGARCTE 13
            C+PG++G RC++
Sbjct: 295 CEPGWSGPRCSQ 306
 Score = 19.7 bits (39), Expect = 4588
 Identities = 6/10 (60%), Positives = 9/10 (90%)
Query: 2
           CQPGFTGARC 11
           C+ GFTG++C
Sbjct: 563 CREGFTGSQC 572
 Score = 19.7 bits (39), Expect = 4588
 Identities = 7/14 (50%), Positives = 10/14 (71%)
Query: 2
           CQPGFTGARCTENV 15
           C PG+ G RC ++V
Sbjct: 373 CPPGWQGPRCQQDV 386
 Score = 19.3 bits (38), Expect = 6156
 Identities = 6/10 (60%), Positives = 7/10 (70%)
Query: 2
           CQPGFTGARC 11
           C PG+TG C
```

```
Sbjct: 768 CPPGYTGLHC 777
 Score = 18.5 \text{ bits } (36), \text{ Expect = } 11083
 Identities = 5/7 (71%), Positives = 5/7 (71%)
Query: 5
           GFTGARC 11
           GF G RC
Sbjct: 453 GFAGPRC 459

→ sqi | 6679096 | ref | NP_032742.1 | Notch gene homolog 3; Notch gene homolog 3, (Drosor)

            musculus]
 gi | 2494294 | sp | Q61982 | NTC3_MOUSE
                                       Neurogenic locus notch homolog protein 3 precurso
 gi | 631742 | pir | | S45306
                          notch 3 protein - mouse
 gi 483581 emb CAA52776.1
                                Notch 3 [Mus musculus]
          Length = 2318
 Score = 29.9 \text{ bits } (63), \text{ Expect = } 4.0
 Identities = 8/10 (80%), Positives = 8/10 (80%)
            CQPGFTGARC 11
Query: 2
            C PGFTG RC
Sbjct: 1235 CHPGFTGPRC 1244
 Score = 27.8 bits (58), Expect =
 Identities = 10/14 (71%), Positives = 10/14 (71%), Gaps = 2/14 (14%)
           CQPGFTGARCTENV 15
Query: 2
           COPGFTG C NV
Sbjct: 646 CQPGFTGPLC--NV 657
 Score = 24.0 bits (49), Expect =
 Identities = 8/14 (57%), Positives = 10/14 (71%)
Query: 2
           COPGFTGARCTENV 15
           C PGFTG C ++V
Sbjct: 380 CPPGFTGGACDQDV 393
 Score = 23.5 bits (48), Expect =
 Identities = 7/10 (70%), Positives = 8/10 (80%)
           CQPGFTGARC 11
Query: 2
           C PG+TG RC
Sbjct: 571 CAPGYTGIRC 580
 Score = 21.8 bits (44), Expect = 1055
 Identities = 6/10 (60%), Positives = 8/10 (80%)
Query: 2
           CQPGFTGARC 11
           C+PG+TG C
Sbjct: 951 CRPGYTGTHC 960
 Score = 21.8 bits (44), Expect = 1055
 Identities = 6/12 (50%), Positives = 11/12 (91%)
Query: 2
           COPGFTGARCTE 13
           C+PG++G RC++
Sbjct: 721 CEPGWSGPRCSQ 732
```

```
Score = 20.6 \text{ bits } (41), \text{ Expect} = 2548
  Identities = 8/14 (57%), Positives = 10/14 (71%)
 Query: 2
            CQPGFTGARCTENV 15
            C P +TG CTE+V
 Sbjct: 263 CPPEWTGQFCTEDV 276
  Score = 20.2 \text{ bits } (40), \text{ Expect} = 3419
  Identities = 7/12 (58%), Positives = 8/12 (66%), Gaps = 2/12 (16%)
            CQ--PGFTGARC 11
Query: 2
            CQ G+TG RC
Sbjct: 418 CQCGRGYTGPRC 429
 Score = 19.7 \text{ bits } (39), \text{ Expect} = 4588
 Identities = 6/10 (60%), Positives = 9/10 (90%)
Query: 2
            CQPGFTGARC 11
            C+ GFTG++C
Sbjct: 989 CREGFTGSQC 998
 Score = 19.7 bits (39), Expect = 4588
 Identities = 7/14 (50%), Positives = 10/14 (71%)
Query: 2
            CQPGFTGARCTENV 15
            C PG+ G RC ++V
Sbjct: 799 CPPGWQGPRCQQDV 812
 Score = 19.3 bits (38), Expect = 6156
 Identities = 6/10 (60%), Positives = 7/10 (70%)
Query: 2
             CQPGFTGARC 11
             C PG+TG C
Sbjct: 1194 CPPGYTGLHC 1203
 Score = 18.5 bits (36), Expect = 11083
 Identities = 5/7 (71%), Positives = 5/7 (71%)
Query: 5
           GFTGARC 11
            GF G RC
Sbjct: 879 GFAGPRC 885
 Score = 17.6 bits (34), Expect = 19953
 Identities = 6/10 (60%), Positives = 7/10 (70%)
Query: 2 CQPGFTGARC 11
          C PG+ G RC
Sbjct: 68 CLPGWVGERC 77
| >gi|27712336|ref|XP 222675.1| similar to crumbs homolog 1 [Mus musculus] [Rattus
          Length = 1104
 Score = 29.5 bits (62), Expect = 5.3
 Identities = 9/14 (64%), Positives = 11/14 (78%)
Query: 2
           CQPGFTGARCTENV 15
           C+PGFTG C EN+
Sbjct: 847 CRPGFTGEWCEENI 860
```

```
Score = 21.0 bits (42), Expect = 1899
 Identities = 6/10 (60%), Positives = 8/10 (80%)
           CQPGFTGARC 11
Query: 2
           C+PG+TG C
Sbjct: 764 CEPGYTGGNC 773
 Score = 19.7 bits (39), Expect = 4588
 Identities = 8/14 (57%), Positives = 10/14 (71%)
           CQPGFTGARCTENV 15
Query: 2
           C PG++GA C NV
Sbjct: 727 CLPGWSGAHCEINV 740
_____| >gi | 7670249 | dbj | BAA95001.1 |
                                 secretory protein containing EGF domain [Xenopus laevi
          Length = 778
 Score = 29.5 \text{ bits } (62), \text{ Expect = } 5.3
 Identities = 9/14 (64%), Positives = 12/14 (85%)
           COPGFTGARCTENV 15
Query: 2
           COPGFTG+ C+ N+
Sbjct: 415 CQPGFTGSNCSVNI 428
 Score = 26.9 bits (56), Expect =
 Identities = 9/14 (64%), Positives = 9/14 (64%), Gaps = 4/14 (28%)
           KCQPGFTGARCTEN 14
Query: 1
           KCQPGF G
                       EN
Sbjct: 538 KCQPGFAG----EN 547
 Score = 23.1 bits (47), Expect =
 Identities = 6/7 (85%), Positives = 7/7 (100%)
Query: 2
           CQPGFTG 8
           C+PGFTG
Sbjct: 166 CEPGFTG 172
 Score = 21.8 bits (44), Expect = 1055
 Identities = 7/11 (63%), Positives = 7/11 (63%), Gaps = 3/11 (27%)
           CQPGFTGARCT 12
Query: 2
           COPGF
                   CT
Sbjct: 95 CQPGFN---CT 102
>gi|18858545|ref|NP 571019.1|
                                     deltaC [Danio rerio]
 gi | 6739553 | gb | AAF27299.1 |
                                DeltaC [Danio rerio]
          Length = 664
 Score = 29.5 bits (62), Expect = 5.3
 Identities = 8/10 (80%), Positives = 10/10 (100%)
           CQPGFTGARC 11
Query: 2
           C+PGFTG+RC
Sbjct: 408 CRPGFTGSRC 417
sqi | 12231943 | gb | AAG49316.1 | AF315554 1 notch-like transmembrane receptor [Caenorhal
          Length = 1270
```

```
Score = 29.1 \text{ bits (61)}, Expect = 7.1
 Identities = 12/23 (52%), Positives = 14/23 (60%), Gaps = 4/23 (17%)
           KCQPGFTGARC----TENVPMKV 19
Query: 1
           KC P FTG RC T +PM+V
Sbjct: 347 KCPPSFTGDRCELNRTAVLPMEV 369
 Score = 23.1 bits (47), Expect = 437
 Identities = 7/11 (63%), Positives = 8/11 (72%)
Query: 5
           GFTGARCTENV 15
           G+TG RC E V
Sbjct: 470 GYTGTRCQEKV 480
 Score = 22.7 bits (46), Expect = 586
 Identities = 7/10 (70%), Positives = 8/10 (80%)
Query: 2
           CQPGFTGARC 11
           C+PGFTG C
Sbjct: 258 CKPGFTGTNC 267
sqi|12231945|qb|AAG49317.1|AF315555 1 notch-like transmembrane receptor [Caenorhak
          Length = 963
 Score = 29.1 \text{ bits } (61), \text{ Expect = } 7.1
 Identities = 12/23 (52%), Positives = 14/23 (60%), Gaps = 4/23 (17%)
Query: 1 KCQPGFTGARC----TENVPMKV 19
          KC P FTG RC
                      T +PM+V
Sbjct: 40 KCPPSFTGDRCELNRTAVLPMEV 62
 Score = 23.1 bits (47), Expect =
 Identities = 7/11 (63%), Positives = 8/11 (72%)
Query: 5
           GFTGARCTENV 15
           G+TG RC E V
Sbjct: 163 GYTGTRCQEKV 173
j-gi|24041035|ref|NP_077719.2
                                 notch 2 preproprotein [Homo sapiens]
          Length = 2471
 Score = 28.6 bits (60), Expect = 9.6
 Identities = 8/10 (80%), Positives = 9/10 (90%)
            CQPGFTGARC 11
Query: 2
            C PGF+GARC
Sbjct: 1333 CPPGFSGARC 1342
 Score = 26.5 bits (55), Expect =
 Identities = 8/10 (80%), Positives = 8/10 (80%)
Query: 2
           CQPGFTGARC 11
           C PGFTG RC
Sbjct: 670 CSPGFTGQRC 679
 Score = 24.8 bits (51), Expect =
                                    135
 Identities = 9/14 (64%), Positives = 9/14 (64%), Gaps = 1/14 (7%)
          KCQPGFTGARCTEN 14
Query: 1
```

```
KCQ GF G C EN
Sbjct: 974 KCQAGFDGVHC-EN 986
 Score = 24.0 bits (49), Expect = 243
 Identities = 7/10 (70%), Positives = 7/10 (70%)
Query: 2
            CQPGFTGARC 11
            C PGF G RC
Sbjct: 1252 CLPGFAGERC 1261
 Score = 23.5 bits (48), Expect =
 Identities = 7/10 (70%), Positives = 8/10 (80%)
           CQPGFTGARC 11
Query: 2
           C PGFTG +C
Sbjct: 937 CLPGFTGDKC 946
 Score = 22.3 bits (45), Expect =
 Identities = 8/14 (57%), Positives = 10/14 (71%)
           COPGFTGARCTENV 15
           C G+ GA CTE+V
Sbjct: 403 CPQGYKGADCTEDV 416
 Score = 21.4 bits (43), Expect = 1415
 Identities = 9/16 (56%), Positives = 10/16 (62%), Gaps = 2/16 (12%)
           CQ--PGFTGARCTENV 15
Query: 2
           CQ
               GFTG C EN+
Sbjct: 556 CQCATGFTGVLCEENI 571
 Score = 21.4 bits (43), Expect = 1415
 Identities = 6/7 (85%), Positives = 6/7 (85%)
Query: 2
           COPGFTG 8
           C PGFTG
Sbjct: 520 CPPGFTG 526
 Score = 21.0 bits (42), Expect = 1899
 Identities = 7/11 (63%), Positives = 8/11
           KCQPGFTGARC 11
Query: 1
           KC GFTG +C
Sbjct: 169 KCLTGFTGQKC 179
 Score = 20.2 bits (40), Expect = 3419
 Identities = 6/7 (85%), Positives = 6/7 (85%)
Query: 2
           CQPGFTG 8
           CQ GFTG
Sbjct: 133 CQVGFTG 139
 Score = 19.3 bits (38), Expect = 6156
 Identities = 7/11 (63%), Positives = 8/11 (72%)
Query: 2
           CQPGFTGARCT 12
           C PG+ G RCT
```

```
Sbjct: 861 CAPGWQGQRCT 871
Score = 19.3 bits (38), Expect = 6156
Identities = 6/12 (50%), Positives = 9/12 (75%)
Query: 2
           COPGFTGARCTE 13
           C PG+ GA C++
Sbjct: 595 CNPGYMGAICSD 606
 Score = 19.3 bits (38), Expect = 6156
 Identities = 8/14 (57%), Positives = 10/14 (71%)
Query: 2
          CQPGFTGARCTENV 15
           C P +TG CTE+V
Sbjct: 286 CPPQWTGQFCTEDV 299
                                receptor tyrosine kinase [Mus musculus]
____ >gi | 296611 | emb | CAA50556.1 |
          Length = 1134
 Score = 28.6 bits (60), Expect = 9.6
 Identities = 8/10 (80%), Positives = 8/10 (80%)
Query: 2
           COPGFTGARC 11
           C PGFTG RC
Sbjct: 244 CPPGFTGTRC 253
| >gi|17136480|ref|NP 476727.1| slit CG8355-PC [Drosophila melanogaster]
                               CG8355-PC [Drosophila melanogaster]
 gi | 7303028 | gb | AAF58097.1 |
          Length = 1504
 Score = 28.6 bits (60), Expect = 9.6
 Identities = 9/12 (75%), Positives = 10/12 (83%), Gaps = 2/12 (16%)
Query: 2
            CQ--PGFTGARC 11
            CO PG+TGARC
Sbjct: 995 CQCAPGYTGARC 1006
 Score = 25.2 bits (52), Expect =
 Identities = 8/14 (57%), Positives = 10/14 (71%)
            CQPGFTGARCTENV 15
Query: 2
            CQ GF G CT+N+
Sbjct: 1076 CQAGFHGTNCTDNI 1089
 Score = 23.1 bits (47), Expect = 437
 Identities = 6/7 (85%), Positives = 7/7 (100%)
            CQPGFTG 8
Query: 2
            CQPGF+G
Sbjct: 1036 CQPGFSG 1042
 Score = 20.6 bits (41), Expect = 2548
 Identities = 6/10 (60%), Positives = 7/10 (70%)
Query: 2
            COPGFTGARC 11
            C PG+TG C
Sbjct: 1163 CHPGYTGKWC 1172
```

```
Score = 17.6 bits (34), Expect = 19953
 Identities = 4/5 (80%), Positives = 5/5 (100%)
           CQPGF 6
Query: 2
           COPG+
Sbjct: 958 CQPGY 962
__| >gi|11527997|gb|AAG37073.1|AF315356_1 NOTCH2 protein [Homo sapiens]
          Length = 2471
 Score = 28.6 bits (60), Expect = 9.6
 Identities = 8/10 (80%), Positives = 9/10 (90%)
            CQPGFTGARC 11
Query: 2
            C PGF+GARC
Sbjct: 1333 CPPGFSGARC 1342
 Score = 26.5 bits (55), Expect =
 Identities = 8/10 (80%), Positives = 8/10 (80%)
           CQPGFTGARC 11
Query: 2
           C PGFTG RC
Sbjct: 670 CSPGFTGQRC 679
 Score = 24.8 bits (51), Expect = 135
 Identities = 9/14 (64%), Positives = 9/14 (64%), Gaps = 1/14 (7%)
           KCQPGFTGARCTEN 14
Query: 1
           KCQ GF G C EN
Sbjct: 974 KCQAGFDGVHC-EN 986
 Score = 24.0 bits (49), Expect = 243
 Identities = 7/10 (70%), Positives = 7/10 (70%)
            CQPGFTGARC 11
Query: 2
            C PGF G RC
Sbjct: 1252 CLPGFAGERC 1261
 Score = 23.5 bits (48), Expect = 325
 Identities = 7/10 (70%), Positives = 8/10 (80%)
           COPGFTGARC 11
Query: 2
           C PGFTG +C
Sbjct: 937 CLPGFTGDKC 946
 Score = 22.3 bits (45), Expect = 786
 Identities = 8/14 (57%), Positives = 10/14 (71%)
           COPGFTGARCTENV 15
Query: 2
           C G+ GA CTE+V
Sbjct: 403 CPQGYKGADCTEDV 416
 Score = 21.4 bits (43), Expect = 1415
 Identities = 9/16 (56%), Positives = 10/16 (62%), Gaps = 2/16 (12%)
           CQ--PGFTGARCTENV 15
Query: 2
           CQ
                GFTG C EN+
Sbjct: 556 CQCATGFTGVLCEENI 571
```

```
Score = 21.4 bits (43), Expect = 1415
  Identities = 6/7 (85%), Positives = 6/7 (85%)
            CQPGFTG 8
 Query: 2
            C PGFTG
 Sbjct: 520 CPPGFTG 526
  Score = 21.0 bits (42), Expect = 1899
  Identities = 7/11 (63%), Positives = 8/11 (72%)
 Query: 1
            KCQPGFTGARC 11
            KC GFTG +C
 Sbjct: 169 KCLTGFTGQKC 179
  Score = 20.2 bits (40), Expect = 3419
  Identities = 6/7 (85%), Positives = 6/7 (85%)
 Query: 2
            CQPGFTG 8
            CQ GFTG
 Sbjct: 133 CQVGFTG 139
  Score = 19.3 bits (38), Expect = 6156
  Identities = 7/11 (63%), Positives = 8/11 (72%)
            CQPGFTGARCT 12
 Query: 2
            C PG+ G RCT
 Sbjct: 861 CAPGWQGQRCT 871
 Score = 19.3 bits (38), Expect = 6156
 Identities = 6/12 (50%), Positives = 9/12 (75%)
Query: 2
            CQPGFTGARCTE 13
            C PG+ GA C++
Sbjct: 595 CNPGYMGAICSD 606
 Score = 19.3 bits (38), Expect = 6156
 Identities = 8/14 (57%), Positives = 10/14 (71%)
           CQPGFTGARCTENV 15
Query: 2
           C P +TG CTE+V
Sbjct: 286 CPPQWTGQFCTEDV 299
____>gi|17136484|ref|NP_476729.1|
                                     slit CG8355-PB [Drosophila melanogaster]
 gi 21645372 gb AAM70966.1
                                 CG8355-PB [Drosophila melanogaster]
          Length = 1469
 Score = 28.6 \text{ bits } (60), \text{ Expect = } 9.6
 Identities = 9/12 (75%), Positives = 10/12 (83%), Gaps = 2/12 (16%)
Query: 2
           CQ--PGFTGARC 11
           CQ PG+TGARC
Sbjct: 971 CQCAPGYTGARC 982
 Score = 25.2 bits (52), Expect = 100
 Identities = 8/14 (57%), Positives = 10/14 (71%)
Query: 2
            CQPGFTGARCTENV 15
            CQ GF G CT+N+
```

-1054225001-020414-17909,

```
Sbjct: 1052 CQAGFHGTNCTDNI 1065
  Score = 23.1 bits (47), Expect =
                                     437
  Identities = 6/7 (85%), Positives = 7/7 (100%)
 Query: 2
             CQPGFTG 8
             CQPGF+G
 Sbjct: 1012 CQPGFSG 1018
  Score = 20.6 bits (41), Expect = 2548
  Identities = 6/10 (60%), Positives = 7/10 (70%)
 Query: 2
             CQPGFTGARC 11
             C PG+TG C
 Sbjct: 1139 CHPGYTGKWC 1148
  Score = 17.6 bits (34), Expect = 19953
  Identities = 4/5 (80%), Positives = 5/5 (100%)
 Query: 2
            CQPGF 6
            CQPG+
 Sbjct: 934 CQPGY 938
 - >gi | 103392 | pir | | B36665
                             slit protein 2 precursor - fruit fly (Drosophila melanogast
           Length = 1469
  Score = 28.6 bits (60), Expect = 9.6
  Identities = 9/12 (75%), Positives = 10/12 (83%), Gaps = 2/12 (16%)
 Query: 2
            CQ--PGFTGARC 11
            CQ PG+TGARC
 Sbjct: 971 CQCAPGYTGARC 982
 Score = 25.2 bits (52), Expect = 100
 Identities = 8/14 (57%), Positives = 10/14 (71%)
            CQPGFTGARCTENV 15
Query: 2
            CQ GF G CT+N+
Sbjct: 1052 CQAGFHGTNCTDNI 1065
 Score = 23.1 bits (47), Expect = 437
 Identities = 6/7 (85%), Positives = 7/7 (100%)
            CQPGFTG 8
Query: 2
            CQPGF+G
Sbjct: 1012 CQPGFSG 1018
 Score = 20.6 bits (41), Expect = 2548
 Identities = 6/10 (60%), Positives = 7/10 (70%)
Query: 2
            CQPGFTGARC 11
            C PG+TG C
Sbjct: 1139 CHPGYTGKWC 1148
 Score = 17.6 bits (34), Expect = 19953
 Identities = 4/5 (80%), Positives = 5/5 (100%)
Query: 2 CQPGF 6
```

```
Sbjct: 934 CQPGY 938
  __|>gi|6755785|ref|NP 035717.1|
                                      tyrosine kinase receptor 1; D430008P04Rik [Mus musc
   gi | 1351248 | sp | Q06806 | TIE1 MOUSE
                                        Tyrosine-protein kinase receptor Tie-1 precursor
                           protein-tyrosine kinase (EC 2.7.1.112), receptor type tie pre
  gi 543313 pir JN0711
             - mouse
  gi|402602|emb|CAA52148.1|
                                  TIE receptor tyrosine kinase [Mus musculus]
  gi | 520946 emb | CAA56739.1 |
                                 TIE1 [Mus musculus]
            Length = 1134
  Score = 28.6 bits (60), Expect = 9.6
  Identities = 8/10 (80%), Positives = 8/10 (80%)
 Query: 2
             CQPGFTGARC 11
             C PGFTG RC
 Sbjct: 244 CPPGFTGTRC 253
      Get selected sequences
                               Select all
                                           Deselect all
   Database: All non-redundant GenBank CDS
   translations+PDB+SwissProt+PIR+PRF
     Posted date: May 29, 2003 2:04 AM
   Number of letters in database: 462,300,935
   Number of sequences in database: 1,438,044
 Lambda
            K
    0.348
            0.282
                       1.87
 Gapped
 Lambda
            K
                   Н
    0.294
             0.110
                      0.610
Matrix: PAM30
Gap Penalties: Existence: 9, Extension: 1
Number of Hits to DB: 26,193,600
Number of Sequences: 1438044
Number of extensions: 536775
Number of successful extensions: 12541
Number of sequences better than 20000.0: 100
Number of HSP's better than 20000.0 without gapping: 11086
Number of HSP's successfully gapped in prelim test: 0
Number of HSP's that attempted gapping in prelim test: 0
Number of HSP's gapped (non-prelim): 12540
length of query: 23
length of database: 462,300,935
effective HSP length: 14
effective length of query: 9
effective length of database: 442,168,319
effective search space: 3979514871
effective search space used: 3979514871
T: 11
A: 40
X1: 14 ( 7.0 bits)
X2: 35 (14.8 bits)
X3: 58 (24.6 bits)
S1: 34 (18.9 bits)
```

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S2: 34 (17.6 bits)